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Medieval Divination by Unexpected Incidents: The *Tabula prenostica Salomonis*

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Abstract

This article explores a little-known prognostic table, the so-called *Tabula Salomonis*, in its four oldest Latin manuscript witnesses from between ca. 1000 and 1300. Unusually for Latin prognostic texts, the table employs unexpected incidents such as animal sounds, sneezes, and bodily twitches combined with the signs of the zodiac as its starting point. Interestingly, the sources for the *Tabula*, a series of Late Antique texts from which the author "picked and mixed," are not extant in Latin. Given a parallel tradition in Arabic, the authors argue that the *Tabula*'s direct precursor is not a Greek text

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(as is the case for many contemporary prognostic texts in Latin), but an Arabic work. This would make it the earliest attested prognostic text translated directly from Arabic into Latin.

Keywords

manuscript studies – medieval history – history of knowledge – prognostication – *Tabula prenostica Salomonis* – al-Ashraf ʿUmar – *Kitāb al-Tabṣira fī ʿilm al-nujūm* – *Alfeal secundum motum lune*

1 Introduction[1]

In 1988, Charles Burnett published a short notice in the *Revue d'histoire des textes* about a hitherto unknown grid-shaped table intended for prognostication, which he had found in two medieval manuscripts. In the older of the two, Leiden Universiteitsbibliotheek Scaliger 38 (s.xi), the table has no title and contains no reference to an author, but in the manuscript Paris, Bibliothèque nationale de France, lat. 16208 (s.xii/xiii), it is labelled *Tabula prenostica Salomonis*.[2] Unlike other Latin prognostic texts from this period, its predictions are based on the observation of what we call "incidents": sudden, unforeseen (and unforeseeable) occurrences in everyday life, such as a candle extinguishing suddenly, or a mouse squeaking unexpectedly. The significance of these incidents, described in the individual cells of the table, varies according to the position of the moon in the signs of the zodiac: a squeaking mouse heard while the moon is in Aries should be interpreted differently ("It will not end well," *Non bonum exitum*) than one heard while the moon is in Taurus ("You will find what you love," *Invenies quod amas*). The table (see Figure 1) lists a series of such unforeseeable events, in the Leiden manuscript in the top row on the horizontal axis, while the left margin contains the signs of the zodiac.[3] The predictions are mostly so general that they lend themselves to a wide range of interpretations: "something good will happen," (*bona res aliqua*

1 This article comes with a companion website designed and coded by Bastiaan Waagmeester, in which three early manuscript versions are presented, see https://tabula.libripendis.eu/.

2 Burnett, "Note," 257–262.

3 The names of the months in the right-hand margin are unique to this manuscript and obscure its purpose. That the table is intended to work according to the position of the moon (and not the sun) in the zodiac is borne out by the text that follows the table in this manuscript, which was written by the same hand and explains how to calculate the sign of the zodiac for

FIGURE 1 The first four rows of the *Tabula* in the manuscript Leiden, UB Sca 38. fol. 37v: the incidents are in the top row, the zodiacal signs in the left margin, and the Julian month names in the right margin.
THE IMAGE IS BASED ON HTTP://HDL.HANDLE.NET/1887.1/ITEM:882103, PROVIDED BY LEIDEN UNIVERSITY LIBRARIES | DIGITAL COLLECTIONS, WHICH IS LICENSED UNDER HTTPS://CREATIVECOMMONS.ORG/LICENSES/BY/4.0/

veniet), "money," (*pecunia*), or "disease" (*egritudo*) can be understood in many different ways by as many different people, and considered accurate and relevant in a wide range of circumstances. In the extant manuscripts, the incident table usually comes with an auxiliary table that makes it easy to determine the position of the moon in the zodiac based on the date in the Julian calendar.

By its shape, divinatory method, and content, the text stands out among the substantial corpus of early and high medieval Latin prognostic texts that has recently started to attract interest among historians.[4] For one, a table is an unusual shape for a prognostic text in the Latin earlier Middle Ages. Additionally, prognostication with a double condition (in this case, an incident plus the lunar position in a specific sign of the zodiac) is not very common either: most prognostic texts known in Latin are based on just one condition, for instance the age of the moon, the sign of the zodiac, or the day of the week ("If the day of the moon is X, then Y").[5] What makes this table unique is the

any given age of the moon. This is chapter 21 of Bede's *De natura rerum*, "*De argumenta de cursu lunae per signum*."

4 The best overview of medieval prognostic texts and practices to date is Heiduk, Herbers, and Lehner, *Prognostication*, which, however, does not mention the *Tabula*. For an overview of recent work on prognostic texts, see: Van Rhijn, "Review Article."

5 Another exception is that of certain brontologies, which offer predictions based on the combination of hearing thunder with a specific sign of the zodiac, or month of the year. See Juste and Chiu, "*De tonitruis*." The most complete corpus of early medieval Latin brontologies can be found in the appendices to Van den Berg, "Early Medieval Brontologies."

fact that unexpected incidents form its basis: that the creaking of one's house or a bird falling from the sky offer signs of the future to the attentive observer is, to the best of our knowledge, unparalleled in medieval Latin Europe.[6] The interpretation of incidents as signs of the future is, however, well-known from non-Latin prognostic traditions, all of which have roots in the Classical world and ultimately Ancient Mesopotamia. In these oldest traditions, however, such predictions were usually based on a single condition, and not connected to the signs of the zodiac.[7]

Thus far, the *Tabula* has remained under the radar of modern research. Both before and after Burnett's publication, it has not received any scholarly attention to speak of; it is, for instance, not mentioned at all in the recently published handbook on medieval prognostication.[8] As it turns out, however, there is a lot to discover about the *Tabula Salomonis* once one starts to dig a bit deeper. For one thing, several hitherto unknown manuscripts of the table have come to light, all dating from before 1500 (see Table 1).[9] One further fifteenth-century Latin manuscript contains a prose version of the table, which made its contents more accessible (and, presumably, easier to copy) by turning it into short sentences of the type "On the ringing of ears. The moon in Aries, a good discovery. In Taurus, worries and fear. […]"[10] This new, late medieval incarnation of

6 That is to say, the table in the twelfth-century manuscript Paris, Bibliothèque nationale de France, lat. 9335, fol. 140r–141r, titled "*Alfeal secundum motum lune*" is another example, but, as we will argue below, this is another selection of the same text as the direct source of the *Tabula Salomonis*. The manuscript is mentioned in Burnett, "Coherence," 267 and n. 50.

7 Mesopotamian precursors to Greek prognostic traditions take us back to the first millennium BCE at least, when the divinatory formula "if condition P is met, then Q will happen" is first attested. See Rochberg, "Observing and Describing"; Rochberg, "'If P then Q'." Good examples of Mesopotamian incident-based prognostic texts can be found in Moren, *Omen Series*.

8 Heiduk, Herbers, and Lehner, *Prognostication*.

9 Charles Burnett kindly informed us of the existence of two manuscripts, mentioned in his *Magic and Divination* (*addenda et corrigenda* to Article XVIII): Madrid, Biblioteca Nacional de España 10053, and Vatican Library, pal. lat. 1196 fol. 76v–86r, which also include the auxiliary table. This last manuscript dates from s.xiii/s.xiv and is therefore beyond the scope of this article. However, it contains a very interesting version, which comes in the shape of twenty-five *rota* (wheel-shaped figures), each with one unexpected incident at the center and its interpretation according to the signs of the zodiac in the "wheel" around it. All these *rota* were added to the lower margin of the main text; most of the incidents correspond to those in some version of the *Tabula*. One further witness of the *Tabula*, also discovered by Burnett, can be found in the manuscript London, University College ms. lat. 15 (s.xiv). This last manuscript is undigitized and came to our attention too late to be included in this article.

10 Paris, Bibliothèque nationale de France, lat. 7337, 207: "De sonitu aurium. Luna in ariete bonitate inuentionum. In tauro angustiam et pauorem. […]"

the *Tabula Salomonis* heralded a fresh chapter in its long transmission history: in this prose form it was printed, translated into several vernaculars, admired, ridiculed, and forbidden, and in some shape it was still in use in the Near East in the early twentieth century.[11] The post-medieval part of the story is, however, beyond the scope of this article and will be told elsewhere.

The medieval material, and especially its five oldest manuscripts, allows us to investigate how the *Tabula* was used and how the glimpses of the future it offered were understood in the earlier phase of its existence in Latin. This brings us to a second reason to be interested in this prognostic table: there are now several arguments which support the idea that its direct precursor was not a Greek (as Burnett thought)[12] but an Arabic text, which would make the *Tabula* the earliest prognostic text translated into Latin directly from the Arabic. What is more, since the oldest extant manuscript (Leiden, Universiteitsbibliotheek Sca 38) dates from the mid-eleventh century,[13] this translation predates the large-scale and sustained efforts to translate Arabic texts into Latin in twelfth-century Spain.

This article aims to present and interpret these new findings. The first section focusses on the *Tabula* and its manuscripts. It presents the range of versions in which the *Tabula* appears in its various medieval manuscripts and investigates how the five oldest manuscript contexts in which the *Tabula Salomonis* survives shed light on the way the text was interpreted in the centuries after its first appearance in Latin. The finding that some manuscripts transmit the *Tabula* among Latin translations of Arabic astronomical works leads to the second section, which presents the evidence for the hypothesis that the *Tabula* is a direct translation from the Arabic. The foundation for this theory will lead to another little-known Latin prognostic table very similar to the *Tabula*, but also to the titanic labors of a thirteenth-century Yemeni scholar, the later Rasūlid sultan al-Ashraf ʿUmar, who put together an encyclopedic work, the *Kitāb al-Tabṣira fī ʿilm al-nujūm* ("Enlightenment in the science of the stars"), which includes a prognostic table with 300 incidents.

As we will explain in what follows, the *Tabula* seems to have entered the Latin manuscript record as one branch of an old, wide-spread prognostic tradition

11 The most recent use of at least part of the prose *Tabula* in an Arabic version is attested in an intriguing description of the secret knowledge of Mandaean priests in early twentieth-century Iraq and Iran. One priest told the investigating anthropologist: "If a raven croaks in a certain *burj* (astrological house), I understand what it says, also the meaning when the fire crackles or the door creaks […]." Drower, *Mandaeans*, 5. In the Mandaean *Book of the Zodiac*, there are indeed a few sections which closely resemble the prose version of the *Tabula*. See Drower, *Book of the Zodiac*, 154.

12 Burnett, "Note," 259.

13 See Borst, *Schriften zur Komputistik*, 239–240. Borst dates the manuscript to ca. 1045.

based on the observation of incidents. This tradition was known throughout the greater Mediterranean world, in several of its languages. During the High Middle Ages, European scholars received the technique of prognostication by incidents with interest, and found easy ways of fitting it into well-known and more established types of knowledge. A brief discussion of the five earliest extant manuscripts will illustrate how this worked in practice.

2 Manuscripts

There are eight manuscripts from before the year 1500 which contain the *Tabula Salomonis*. At least one further manuscript contains the aforementioned fifteenth-century prose version.[14] Even though all these manuscripts are witnesses of the same text, the variations between them are substantial. We are, therefore, looking at a small section of what must have been a much larger textual tradition.

TABLE 1 Latin manuscript witnesses of the *Tabula* until ca. 1500. The manuscripts marked with * are discussed in this article

Table

*L	Leiden, Universiteitsbibliotheek Sca 38	s.xi	France/Lotharingia
*B	Bordeaux, Bibliothèque municipale 11	s.xii	France
*V1	Vatican Library, vat. lat. 642	s.xii	France (Lyon?)
*P1	Paris, Bibliothèque nationale de France, lat. 16208	s.xii^{ex}–xiii^{in}	France
*M	Madrid, Biblioteca Nacional de España 10053	s.xiii	Toledo
V2	Vatican Library, reg. lat. 1324	s.xv	France
P2	Paris, Bibliothèque nationale de France, lat. 7438	s.xv	France?
VRot	Vatican Library, pal. lat. 1196 (*rota*)	s.xiii/xiv	France

Prose

P3	Paris, Bibliothèque nationale de France, lat. 7337	s.xv	Italy?

14 The tenth manuscript is London, University College ms. lat. 15 (s.xiv); see note 9.

One relatively stable factor in the medieval manuscripts is the attribution of the *Tabula* to Salomon in three of our manuscripts (*P1*, *P2*, and *P3*). While the text seems to have started out as an anonymous work, some of its later copies connect it to this otherwise unspecified author. The most likely candidate for this alleged authorship is the Old Testament king Salomon (today known as King Solomon), who in the High and late Middle Ages (both in the Latin West and in the Arabic world) was also well-known as a powerful magician and astrologer, able to understand the language of animals.[15] That the attribution first appears around the same time that King Salomon began to rise to fame in this extra-biblical sense is surely no coincidence, but further research is needed to find out how the connection between text and alleged author should be interpreted. However, it is evident that attributions of prognostic texts to renowned characters from the Old Testament were nothing new. Several Old Testament figures, such as the prophets Daniel and Ezra, were well-known as the authors of such texts by this time, so King Salomon was in good and familiar company.[16]

How the manuscripts relate to each other can be studied, first of all, by a comparison of the incidents they contain, which immediately reveals how no two of them show very close relationships. The number of incidents varies between fourteen and thirty-eight, their wording shows differences (even if their meaning is often the same), and the order in which the incidents are listed is different in each manuscript, at least, after the first ten. Also, on the level of the individual predictions in the cells of the table, we encounter a world of small variations in orthography and choice of words, but there are also some remarkable larger differences. In *V2*, for instance, the table has been copied back to front compared to the other tables, while the signs of the zodiac appear in the correct order.[17] In other cases, it is clear that copying a table was as difficult for a medieval scribe as it is for us today: some predictions have moved by one row or one column,[18] while others were misread (for instance: "morem" for

15 Winston, *Wisdom of Solomon*, 3 and 14–25; Torijano, "Solomon and Magic," 122–123. For the Arabic traditions, see Walker and Fenton, "Sulaymān b. Dāwūd."

16 There are several prognostic texts attributed to the prophet Daniel in the Latin traditions, most notably the *Lunare Danielis* (a lunary) and the *Somniale Danielis* (a dream-book), while the prophet Ezra was the alleged author of the much-copied *Revelatio* (or *Subputatio*) *Esdrae*. For the texts attributed to Daniel in other languages, see DiTommaso, *Book of Daniel*, chapter 4; for the *Subputatio Esdrae*, see Matter, "'Revelatio Esdrae'."

17 This may well indicate an Arabic link – see below.

18 This type of error is aptly called a "slide" by Van Dalen, see his "Geographical Table," 534–535.

"rumorem," or "pontifices" for "potentis"), and sometimes *Augensprünge* have occurred. Even if we allow for copyists who did not always adhere to the letter of their example but felt free to change small things, the sheer volume of minor variations, outright errors, and more significant differences between the medieval manuscripts indicates that we are looking at some parts of a family tree from which most members by far are missing. Taking into consideration the fact that the Arabic *Tabṣira* (see below) in its oldest fourteenth-century manuscript contains no less than 300 incidents, it is possible that also in the Latin tradition, (much) longer versions existed. A prose version containing forty-two incidents eventually "fossilized," as it were, into a set text when it was first printed in a parallel Latin-German edition in the sixteenth century.[19]

Even though the eight witnesses of the *Tabula* in tabular form taken into consideration for this study do not allow for the creation of a straightforward stemma, let alone a collated edition, we can investigate how this prognostic device was received and interpreted in the first centuries of its Latin transmission. Given the fact that it offered a type of prognostication previously unknown in the Latin world, how did it "land" within European traditions of knowledge? A closer look at the manuscript contexts in which the earliest four tables survive sheds light on this question.

3 Interpreting the *Tabula Salomonis* in the High Middle Ages

How was the *Tabula Salomonis* received and how did educated audiences at the time understand its contents and assess the knowledge it contained? The best way to gain insight into such questions is to analyze the manuscript contexts in which the text was copied. Medieval compilers, after all, often selected their materials carefully in order to serve specific purposes and audiences, and readers of these manuscripts often added warning signs or notes if they encountered dubious content on the pages.[20] While the compilations in which the *Tabula* was included show clearly how the text was considered interesting especially in the context of either time reckoning (*computus*) or recently translated Arabic astronomical and astrological texts, it is important to note right

19 See Burnett, "Note," 259–260. From this point on, the text was no longer attributed to Salomon, but to the wise and learned Arabic king Zebel. Khunrath, *Liber Zebelis regis*. Which manuscript Khunrath used is still a mystery. See below: the name Zebel may be derived from Sahl ibn Bishr, a well-known early medieval Arabic astronomer, whose works were available in Latin translations in the High Middle Ages.

20 The most comprehensive study of this phenomenon for the earlier Middle Ages is Steinová, *Notam superponere studui*.

away that none of our manuscripts shows even the slightest sign of rejection or doubt about this prognostic text.[21] It seems that our compilers saw no fundamental difference between the *Tabula* and the texts surrounding it, which raises the question of the extent to which our modern category of "prognostication" (a modern term, for which there was no equivalent in the Middle Ages) as a distinct branch of knowledge was always recognized or considered relevant in the medieval period itself. A brief content description of the five earliest manuscripts, produced between the eleventh and thirteenth centuries, will illustrate how compilers of the time fitted the *Tabula* in among what they considered to be related material.

The eleventh-century Leiden manuscript, the oldest witness of the table known to us, is a compilation with time reckoning (*computus*) as its central theme.[22] It opens with a useful and authoritative selection of early medieval material, such as Bede's (d. 735) *De temporum ratione* and *De ratione computi*, and a series of tables with which one could calculate the correct Easter date. Thereafter, the codex includes more recent texts with related subjects, extending the scope of the manuscript to astronomy and mathematics. Here we find, among other things, explanations of the astrolabe (an excerpt from a text formerly attributed to Gerbert of Aurillac) and of the abacus.[23] The *Tabula*, which fills one full page (fol. 37v), can be found among the older computistic material. It is located between texts on lunar epacts and, appropriately, on the movement of the moon through the twelve signs of the zodiac. This latter explanation is clearly connected to the contents of the *Tabula*, for which it was necessary to know in which sign of the zodiac the moon was on the day when the unexpected incident was observed. This context shows how the (untitled and unattributed) *Tabula* was interpreted as a table related to *computus* by the eleventh-century compiler. It does not stand out in any way from the rest of the codex, which contains many tables of comparable design.

The Bordeaux manuscript, a twelfth-century codex from southeastern France,[24] also transmits the *Tabula* in the context of computistic and calendrical material, but the bulk of the manuscript is made up of very different material. About a quarter of its content consists of the Gospel of St. Matthew and concordance tables of the four Gospels. This is followed by mostly anonymous

21 The same observation holds true for the *Tabṣira*, see Schmidl, "al-Ashraf ʿUmar's *Tabṣira*."

22 See Rijksuniversiteit Leiden, *Catalogus compendiarius*, 52.

23 On these works and their many extant manuscripts, see Gerbert of Aurillac, *Opera Mathematica*.

24 See Couderc, *Catalogue des manuscrits*, 7–16. Note that the *Tabula* is not mentioned in any way; fol. 193v–194r are simply missing from the otherwise extensive manuscript description.

sermons and (excerpts of) writings by several Church Fathers and more recent religious authorities, as well as extracts of councils and papal decrees. On fol. 189r, the manuscript changes tack: here we find a list of the most famous kings of each age of the world (starting with Methuselah and ending, on fol. 189v, with the second-century Roman emperors Antoninus and Commodus), several computistic tables, a calendar (fol. 190r–191r), more computistic tables and short texts, then the untitled *Tabula* with twenty-five incidents (fol. 193v–194r), followed by more texts on computistic and religious themes. The *Tabula* itself is preceded by the auxiliary table found in more manuscripts (fol. 193v), which allowed its user to find out easily in which sign of the zodiac the moon was on any given day of the month. The *Tabula* is, then, clearly part of a block of texts and tables with *computus* as its main theme.

Like the Leiden codex, the manuscript Vatican Library, vat. lat. 642 (*V1*) from twelfth-century France, consists of many texts on *computus* and on the night sky.[25] Similar to the Leiden manuscript, the entire first part of this codex is filled with texts by Bede (*De natura rerum, De temporibus*), followed by works by Isidore of Seville (d. 636) and Alcuin of York (d. 804), as well as several anonymous computistic texts. In this case, however, the (again unattributed, untitled) *Tabula* is a separate codicological unit, added to the very end of the manuscript, but also dated to the twelfth century. On the one hand, therefore, the table again found a home within a computistic dossier, while its codicological separateness opens up the tantalizing possibility that initially the *Tabula* may have been a text written on a single, separate leaf. The fact that it was integrated into this manuscript shows again that the person who added the *Tabula* to this codex considered the text as a computistic tool.

Things look somewhat different in the manuscript Paris, BnF, lat. 16208 (*P1*), a beautifully made compilation of French provenance from the late twelfth or early thirteenth century.[26] Unlike the earliest three witnesses of the *Tabula*, this manuscript is not a *computus* manuscript, but a compilation containing Arabic astronomical and astrological material translated into Latin. The manuscript features, among a lot of other material, several works by Māshāʾ Allāh (lat. Messahallah; d. ca. 200/815), the famous Toledan Tables,[27] again the work on the astrolabe also found in the Leiden manuscript, and an astrological text by Sahl ibn Bishr (d. ca. 230/845), who is here called Zehel.[28]

25 Vattasso, *Codices Vaticani Latini*, 491–493.

26 On this manuscript see Thorndike, "Notes"; Juste, *Catalogus codicum astrologorum*, 236–240; Juste, "MS Paris."

27 Pedersen, *Toledan Tables*.

28 On these two famous Arabic astronomers see Ullmann, *Natur- und Geheimwissenschaften*, 303–306 and 309–312; Sezgin, *Geschichte*, 102–108 and 125–128; Dykes, *Works*, 51–66.

The last of the five oldest manuscripts, the thirteenth-century codex Madrid BN 10053 (*M*), is similar to the Parisian compilation just discussed.[29] This, too, is a collection which contains (among other material) a series of Arabic astronomical and astrological texts translated into Latin. Again, we encounter works by Māshāʾ Allāh, al-Zarqālī,[30] and other Arabic authors. What is important in this manuscript is that the *Tabula* rubs shoulders with parts of Sahl ibn Bishr's (here called Zal) work "The fifty judgements" (*De iudiciis*):[31] Sahl's text – that is, parts of books 3, 4, and 5 of *De iudiciis* – comes first (fol. 45va–56vb), and the unattributed *Tabula* immediately follows in such a way that it can easily be mistaken for a part of *De iudiciis*. It could well be that this is how the *Tabula* came to be ascribed to "the wise king Zebel," whom we find as the author of the prose version from the sixteenth century.

On the basis of the evidence provided by these five oldest manuscript witnesses of the *Tabula*, then, it is clear that in the eyes of several generations of compilers, it fitted as naturally among computistic texts as among translations of Arabic astronomical and astrological works. The context in which we find the *Tabula* is always scholarly. This illustrates well how in the eyes of compilers and learned users of these manuscripts, prognostic, divinatory, computistic, astrological, and astronomical texts could fall into the same fluid categories of knowledge.

4 The Arabic Connection

The reception history of the *Tabula*, as we have just seen, already suggests a connection with texts from the Arabic world, even in its earliest computistic contexts from before the year 1200. The manuscript contexts alone, however, do not offer any conclusive evidence for its pre-Latin history. A Greek table as a possible precursor, suggested by Burnett on the basis of the occurrence of the word "patriarch" in the table is, however, not the most likely theory.[32] There is, for instance, evidence that the term was also known to Arabic authors, such as al-Bīrūnī (b. 362/973), who explains it in his *Kitāb al-Athār al-bāqiya*.[33] In order to demonstrate how the *Tabula*'s direct ancestor was likely Arabic, we must now take a somewhat roundabout route, which involves various steps. First

29 See Juste, "MS Madrid."
30 Latin: Azarquiel, also Arzachel; d. 493/1100.
31 An English translation of this otherwise unedited work is available in Dykes, *Works*, 51–66.
32 See Burnett, "Note," 259.
33 Sachau, *Chronology*, 284–289.

of all, we will trace the most important sources, the "raw material" behind the *Tabula*, which will take us back to Ancient Greece and the Byzantine world. Then, we will introduce another prognostic table which survives in a single Latin manuscript of the twelfth century and may well be our *Tabula*'s sibling. In this text, clear traces of a translation process from the Arabic are visible. Finally, we will introduce the thirteenth-century Yemeni scholar-turned-sultan al-Ashraf ʿUmar and his monumental encyclopedic work, the *Tabṣira*. One chapter of this work includes a much longer incident-based prognostic table, which works exactly like the *Tabula* and shares a substantial number of its incidents. Together, these three lines of investigation provide enough arguments for the *Tabula*'s Arabic ancestry.

4.1 *The Raw Material behind the* Tabula: *Ancient Greek Prognostic Texts*

The incidents listed in the *Tabula* can be clustered into several categories: we find, for instance, animal sounds, involuntary movements of various body parts, accidents happening to clothes, chance meetings in the street, and sudden sounds made by inanimate objects. Each of these categories of incidents corresponds to distinct types of prognostic texts known from Ancient Greece,[34] some of which have survived to the present day either in much later Greek manuscript copies or in medieval Arabic translations.[35] The *Tabula*'s incidents seem to have been selected from such older texts. One can imagine that some kind of social logic was at work here, where the author selected familiar incidents, and not, for instance, sounds of animals or items of clothing unknown to his intended audience. What these earliest sources of the *Tabula* have in common is that none of them works with a double condition: the astronomical layer which links the incident to the sign of the zodiac is completely missing, and is therefore clearly part of a later phase of its genesis. The stages which connect the oldest Greek sources with the *Tabula* of our medieval manuscripts can probably no longer be reconstructed with any precision; what matters here, however, is that the *Tabula* still bears the unmistakable imprint of its raw material. Two examples show this clearly.

34 For instance, Dillon, *Omens and Oracles*. Although the author devotes little attention to such texts, he offers elaborate descriptions of the different kinds of divination; see, for instance, chapter 4, "Interpreting Omens from birds" and chapter 5, "Portents and Prodigies."

35 Some of these texts may well be rooted in much older ones, for instance those recorded in Babylonian or Mesopotamian texts. More research is needed to substantiate such a connection, however. See Rochberg, "Babylonian Origins"; Rendu Loisel, "When Gods Speak to Men," 296.

The first example is that of involuntary bodily movements. Several incidents in the *Tabula* are different types of "twitches," sudden movements of some part of the human body. Their interpretation as signs with prognostic meaning is known as *palmomanteia*, for which lengthy handbooks are attested in Classical Greece as early as the third century BCE. The concept behind such texts, always by a single condition, is that an unexpected twitching of any part of the body (ranging from a complete arm to one small section of one's left eyebrow) has prognostic significance. Like the *Tabula* itself, palmomantic texts also enjoyed a very long life-span, which eventually resulted in medieval and early modern translations, including into Russian, Arabic, Romanian, and Hebrew.[36] What is important for our purposes here is that there is no trace of any medieval palmomantic text in Latin that could have served as a source for the *Tabula*.

A similar story can be told about a second example, the interpretation of the various sounds made by a wide range of birds and four-legged animals. In this case, the earliest known list which offers prognostications based on croaks, chirps, whinnies, and the like is in Arabic,[37] while – again – no equivalent in Latin exists. At the same time, it is clear that belief in the prognostic value of such sounds was wide-spread in the ancient and medieval Mediterranean world. Around the year 400 CE, for instance, the Church Father John Chrysostom (d. 407) told those who wished to be baptized that they should keep away from the "foolish practices of the Greeks" who were stupid enough to believe that "the cawing of crows, the squeaking of mice, the creaking of beams" were omens.[38] We have, however, no evidence for the existence of prognostic texts in Greek on the basis of animal sounds as early as this.

Without offering a more exhaustive exploration of this oldest layer of the *Tabula*'s sources here, it is clear that its foundation was based on rich, wide-spread traditions of divination by various every-day incidents, and that its compiler combined selections of older texts into a new format that had a bit of everything. When exactly the astronomical second condition was added to the mix cannot be established without further research, but it seems most likely that this was a relatively late development. Given the fact that the key texts behind the *Tabula* do not seem to have existed in Latin at all, the central

36 For the full corpus, as far as it was known in the early twentieth century, see Diels, *Zuckungsliteratur*. Some of the extant manuscript copies are as late as the early modern period. On the early Greek understanding of *palmomanteia*, and on some of the earliest evidence of this form of prognostication, see Dasen and Wilgaux, "De la palmomantique."

37 See Fahd, *La divination arabe*, 446–449.

38 John Chrysostom, *Baptismal Instructions*, 39. See also the remarks on the belief in the meaning of twitching and of mice eating one's clothes in Augustinus, *De doctrina Christiana*, II, XXI, chapter 31. Augustinus frames such ideas as superstition.

question about its immediate forerunner is a deceptively simple one: was the *Tabula*'s direct predecessor an ancient Greek or Byzantine Greek text, or rather an Arabic one? To make the case for Arabic, we will now introduce another piece of the puzzle: the *Alfeal secundum motum lune*, a Latin table extant in just a single Latin manuscript, which may well be our *Tabula*'s "sibling" and clearly betrays an Arabic provenance.

4.2 Alfeal secundum motum lune *and the* Tabula Salomonis

In the late twelfth-century Italian manuscript Paris, BnF, lat. 9335, on fol. 140r–141r, there is a table which has a lot in common with the *Tabula Salomonis*. It has the same shape, it lists twenty-six incidents under the signs of the zodiac, and it offers predictions that show a high degree of similarity with those of the *Tabula*. There is little doubt that this table was a direct translation from the Arabic: its title is *Alfeal secundum motum lune*, *alfeal* being a transliteration of the Arabic *al-fa'l* (الفأل, omen). *Alfeal* comes with the same auxiliary table found in some of the Latin manuscripts, another grid-shaped table that helps the user look up the current position of the moon in the zodiac.[39] This Paris manuscript is filled with texts translated from the Arabic by the well-known translator Gerard of Cremona (d. 1187), who in the second half of the twelfth century worked in Toledo, the main center of translations from Arabic into Latin at the time. What is more, the list of the texts he translated contains a work called *Liber de accidentibus alfel*, which in all probability refers to the *Alfeal secundum motum lune*.[40] If the *Tabula*'s "sibling" is so clearly a translation from the Arabic, it is not far-fetched to assume the same for the *Tabula* itself.

A closer look at the *Alfeal* table reveals a few other interesting things. First of all, the incidents are similar but not the same as those in the *Tabula*, with just a few exceptions. All categories of incidents present in the *Tabula* appear here too: twitching body-parts, sneezes, animal sounds, chance meetings,

39 The manuscript also contains a note to help the users of the auxiliary table. Paris, BnF, lat. 9335, fol. 140r: "Capitulum cognitionis mansionis Lune: Scias quid preteriit de mense arabico ([in the margin:] id est lunari, id est quota erit Luna) et accipe illud in linea que est super tabulam, et extrahe ipsum ad signa que sunt in linea que opponitur mensi Latino in quo tu es, et scies tunc ubi mansio est Lune ex signis per illud, si deus voluerit." (Summary, how to know the Lunar Mansion: know what has gone past of the Arabic month ([in the margin:] that is, the lunar (month), that is, the day of the month) and find that number in the line at the top of the table, and subtract that from the sign of the zodiac which is on the opposite side of the Latin month in which you are, and in this way you will then know where the Lunar Mansion is through the signs, if God wills.)

40 Burnett, "Coherence," 251–254 and 267 with n. 50, and see 281, n. 70 for the *Liber de accidentibus alfel*; Kunitzsch, "Gerard's translations," 79–80.

unfortunate things happening to clothes, and other sudden, unpredictable occurrences. There is even some overlap between the two tables: they both list "the howling of dogs," "the twitching of a hand," and "the sudden extinction of a candle" as incidents. This suggests that we are not dealing with two different sections of a longer table, but with two distinct selections from a longer parent text. The fact that there is some overlap in the list of incidents, moreover, may well indicate that both selections already existed as separate texts in Arabic before they were translated into Latin.

A second element worth mentioning is that both texts were translated by different persons. The language used in the *Tabula* is clearly distinguishable from the language of the *Alfeal*. Where the *Tabula* always uses the term "vestimenta" for clothes, for instance, *Alfeal* uses the equivalent "panni"; where the *Tabula* uses the phrase "pavor de […]" (fear of […]), the *Alfeal* prefers to warn its reader to beware of something ("cave […]"); where *Alfeal* uses "saltus" for all cases of involuntary bodily movement, the *Tabula* never uses this word, but a range of different terms ("motus," "pulsus," or the verb "saliet") instead.

While the *Alfeal*, as well as the manuscript in which it survives, bear the signs of an Arabic parentage, such clues seem to be missing in the *Tabula Salomonis*, at least at first sight. More research is needed about the exact wording of the *Tabula* in Latin and potentially in Arabic. The following example illustrates this well: the *Tabula* contains the same incident twice, which is strange in the light of its otherwise careful organization. The incident in question is "the noise of fire," which occurs as "de sonitu ignis" and "de crepitu ignis." This seemingly insignificant detail becomes much more interesting against the background of some Arabic vocabulary. Rather than accidentally listing the sound of fire twice, it is more likely that the translator confused the Arabic word for "fire" with that for "falcon," an incident which would make perfect sense among other bird sounds. The words for "fire" and "falcon" are not exactly the same, but look very similar in manuscripts, where diacritical points are often omitted: الباز (*al-bāz*, falcon) and النار (*al-nār*, fire). It does not take much imagination to picture a translator reading "fire" where "falcon" was meant, and the sound of a falcon would fit easily among the other animal sounds listed. So, behind the double occurrence of "the sound of fire," there may well be an error that can be easily explained on the basis of an Arabic direct predecessor of the *Tabula*.

The most likely background of both the *Tabula* and the *Alfeal* is, then, as follows. The ancestor of both tables was one longer table in Arabic, which offered predictions on the basis of incidents and the signs of the zodiac. This long table was excerpted at least two times. The earliest Latin translation we have

of one of these excerpts is the *Tabula Salomonis* in the Leiden manuscript from the mid-eleventh century. In all probability, this short table was, in its own turn, an excerpt of a longer Latin table. The existence of such a longer table in Latin is the only way to explain the consistency of language throughout the extant manuscripts, as well as the longer versions of the *Tabula* in the other manuscripts, and its forty-two incidents in the printed edition. In the middle of the twelfth century, meanwhile, another excerpt of the longer Arabic table was translated into Latin, in all probability by Gerard of Cremona. As far as we know, this table never was a success story in the Latin West, but it does offer a crucial piece of the puzzle here.

This now brings us to the longest incident-based prognostic table in any language known to date: chapter 40 of the thirteenth-century *Kitāb al-Tabṣira fī ʿilm al-nujūm* by al-Ashraf ʿUmar, which includes a table with no less than 300 incidents in its oldest, fourteenth-century manuscript witness.[41]

4.3 *The Sultan and His Table: Prognostication by Incidents under the Signs of the Zodiac in the* Kitāb al-Tabṣira fī ʿilm al-nujūm

The final element of the search for an Arabic connection takes us to yet another time and place, which again underlines how wide-spread and well-known prognostication by incidents was in the wider Mediterranean world. In thirteenth-century Yemen, the future Rasūlid sultan al-Malik al-Ashraf (Mumahhid al-Dīn) ʿUmar b. Yūsuf b. ʿUmar b. ʿAlī b. Rasūl (d. 695/1296) was an extremely prolific scholar and instrument maker before he ascended to the throne. In addition to treatises about agriculture, equine studies, genealogy, astronomy, and medicine, he also compiled a work called *Kitāb al-Tabṣira fī ʿilm al-nujūm* ("Enlightenment in the science of the stars").[42] In this fifty-chapter work,[43] al-Ashraf ʿUmar wrote about a range of topics, all loosely related to the sun, the moon, and the starry night sky: there are chapters about astronomy and astrology, about prognostication and time-keeping, mathematics and geography.[44] Although he rarely mentions his sources, the author was clearly well-informed about his subject matter and had access to the relevant knowledge, either through books or scholars.

41 There are two extant manuscripts of the work: Oxford, Bodleian Library, Huntington 233 (s.xiv) and Paris, Bibliothèque nationale de France, arabe 2601.2 (s.xvii).

42 Schmidl, "al-Ashraf ʿUmar's *Tabṣira*," 217–218.

43 This is the case in the Oxford manuscript; the Paris copy neither numbers the chapters nor contains a table of contents.

44 The ongoing project to edit this text, undertaken by Petra G. Schmidl, can be found here: https://tabsira.hypotheses.org/.

For our present purpose, the most important part of this enormous compendium is chapter 40, which is completely filled with tables. The first part contains tables with elections, which specify whether it is a good, bad, or ambiguous time for specific activities (for instance, racing horses or buying jewels), defined by the position of the moon in one of the zodiacal signs.[45] What follows is another table, but this time with a list of 300 incidents and their interpretations. Again depending on the lunar position in the zodiac, it provides twelve prognostications for each incident. It fills a solid twenty-five pages of the Oxford manuscript (Bodleian Library, Huntington 233, fol. 123v–135v), while the Paris copy comprises two scattered fragments with just fifty-five incidents (fol. 170r–v and fol. 166r–v). The design of both tables closely resembles that of the *Tabula Salomonis*: in the *Tabṣira* too, the incidents are listed on one axis of the table, the signs of the zodiac on the other, and short predictions are offered in individual cells. However, the auxiliary table in the Latin versions, which helps the user to determine the lunar position in the zodiac, is missing in chapter 40 of the *Tabṣira*. Although providing them together was surely more convenient, the auxiliary table was not indispensable, since there were other possibilities to determine the position of the moon in premodern Islamicate societies. One could, for instance, use a *zīj*, an astronomical-astrological handbook with tables that allowed the reader to reconstruct the night sky at nearly any given place and time. In this sense, the *Tabṣira* steers a middle course by including in chapter 22 a rule of thumb with a table that makes it possible to determine the position of the moon in the zodiacal signs for any date in the Muslim calendar.

That the provenance of the material gathered by the sultan varied is indicated by the line which heads each page in more or less the same wording: "The beneficent omens and incidents according to the course of the moon in the twelve zodiacal signs," to which some pages add "according to the opinion of the Indians, the Persians, and the (Eastern) Romans."[46] The different kinds of incidents listed in the sultan's table are all familiar: we find, for instance, sneezes, twitches, animal sounds, things happening to clothes and household items, as well as unusual encounters. Several incidents also appear in the *Tabula*, and some are so specific that it can hardly be a coincidence to find them in both texts. While one could say that a cockerel's crowing is a rather generic occurrence, the incident described as "the sound of a mouse gnawing

45 Another example of elections, this time lunar, concerning recommendations for specific activities in the respective lunar mansions, is provided by al-Ashraf ʿUmar in chapter 25 of the *Tabṣira*. See Varisco, "Magical Significance," 19–40.

46 The first part: كرمة الزجر والحوادث على مسير القمر في البروج الاثنى عشر – and the second: على رأي الهند والفرس والروم.

on one's garments" in both the *Tabula* and the *Tabṣira* can hardly be anything but a smoking gun for a shared ancestor of both texts.

The common denominators of the sultan's table and the *Tabula Salomonis* are, all in all, so striking that the only sensible explanation is a common descent – an aspect of this investigation that will require further attention in the future. While it can be assumed that prognostication by incidents and the zodiac is relatively well-attested in the extant Arabic manuscript record,[47] for instance in little explored *majmūʿāt* manuscripts containing a multitude of texts, more research is needed to further investigate the fascinating – entangled – histories of this little-known type of prognostication.

5 Conclusions

All in all, this first study of the *Tabula Salomonis* and its Arabic background illustrates several little-explored aspects of the history of medieval knowledge and of the history of prognostication in particular. The *Tabula* is an interesting example of the way in which Arabic material occasionally found its way into the Latin world before so many expert translators set to work at their writing desks in twelfth-century Spain. The *Tabula* appeared around the same time as a number of other translations from the Arabic, for instance the *Alchandreana* with its mainly astrological content (from the late tenth century onwards), or the earliest translations of Arabic texts on the astrolabe.[48] The *Tabula*'s earliest manuscript contexts, meanwhile, show us how such imported knowledge effortlessly found a place among the highly regarded and well-known categories of knowledge in Latin intellectual circles. This, in turn, sheds light on the status of prognostic knowledge in the Middle Ages: there is not the slightest sign of suspicion, doubt, or rejection of the text until well into the early modern period[49] – quite the contrary.

47 See for instance the fourteenth-century manuscript of the *Kitāb al-Bulhān*, Oxford, Bodleian Library, Bodley or. 133, fol. 72v–73r (https://archive.org/details/KitabAlBulhan/, accessed Feb. 2, 2023); see also Carboni, *Kitāb al-bulhān*, 15.

48 See Juste, *Les* Alchandreana; Borst, *Astrolab und Klosterreform*; Borrelli, *Aspects of the Astrolabe*. See, however, Zuccato, "Arabic Singing Girls," who argues that the earliest texts on the astrolabe translated into Latin from the Arabic were no translations, but derived from oral traditions.

49 The best example of this is the following work, in which the prose version of the *Tabula* was ascribed to a "pagan king Zebel": Praetorius, *Der Abenteuerliche Glückstopf*, especially chapter 3 at 203–217 and 205: "des heydnischen Abgöttischen Königs Zebelis Astrologische Raritäten."

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